

Customer No.: 07278

Docket No.: 04107/100L443-US3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: CUSTOMER NO.: 07278

Lance G. LAING ART UNIT: T.B.A.

Serial No.: T.B.A. EXAMINER: T.B.A.

Confirmation No.:

Filed: Concurrently Herewith

For: BIOSENSOR FOR SMALL MOLECULE ANALYTES

INFORMATION DISCLOSURE STATEMENT

MAIL STOP Patent Application
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In order to comply with 37 CFR 1.97 and 1.98, attached hereto is a copy of Form PTO/SB/08A. Copies of the documents listed thereon were previously filed on December 2, 2002 and September 22, 2003 in U.S. Patent Application Serial No. 10/222,952, filed August 15, 2002 (our Docket No.: 4107/1L443-US1).

M:\4107\100L443-us3\00064140.WPD [*4107100L443-US3*] /font = 10

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO/SB/08A) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing Form PTO/SB/08A next to the document. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

The present Information Disclosure Statement is being submitted in compliance with 37 CFR 1.56, but the citation of such document is not to be construed as an admission that such document is necessarily relevant or prior art. No representation is intended that the cited documents represent the results of a complete search, and it is anticipated that the Examiner, in the normal course of examination, will make an independent search and will determine the best prior art consistent with 37 CFR 1.104(a) and in the course of each search, will review for relevance every document cited on the attached form even if not initialed.

Early and favorable consideration is earnestly solicited.

Serial No. T.B.A.

Docket No. 04107/100L443-US3

Respectfully submitted,

Dated: September 30, 2003

A handwritten signature in black ink, appearing to read "Paul F. Fehlner", with a horizontal line drawn underneath it.

Paul F. Fehlner

Registration No. 35,135

Attorney for Applicant

DARBY & DARBY
Post Office Box 5257
New York, NY 10150-5257
(212) 527-7700

Serial No. T.B.A.

Docket No. 04107/100L443-US3

- 3 -

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet	1	of	3
-------	---	----	---

Complete if Known

Application Number	T.B.A.
Filing Date	Concurrently Herewith
First Named Inventor	Lance Laing
Group Art Unit	T.B.A
Examiner Name	T.B.A.
Attorney Docket Number	04107/100L443-US3

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
	1.	US- 5,034,506	07/23/1991	Summerton et al.	
	2.	US- 5,459,040	10/17/1995	Hammock et al.	
	3.	US- 5,571,722	11/5/1996	Rosson	
	4.	US- 5,591,578	01/07/1997	Meade et al.	
	5.	US- 5,637,684	06/10/1997	Cook et al.	
	6.	US- 5,677,437	10/14/1997	Teng et al.	
	7.	US- 5,783,682	07/21/1998	Cook et al.	
	8.	US- 5,792,844	08/11/1998	Sanghvi et al.	
	9.	US- 5,952,172	09/14/1999	Meade et al.	
	10.	US- 5,965,456	10/12/1999	Malmqvist et al.	
	11.	US- 6,063,573	05/16/2000	Kayyem	
	12.	US- 6,071,699	06/06/2000	Meade et al.	
	13.	US- 6,087,100	07/11/2000	Meade et al.	
	14.	US- 6,238,884	05/29/2001	Short et al.	
	15.	US- 6,319,713	11/20/2001	Patten et al.	
	16.	US- 6,335,160	01/01/2002	Patten et al.	
	17.	US- 6,346,378	02/12/2002	Stanley et al.	
	18.	US- 6,352,842	03/05/2002	Short et al.	
	19.	US- 6,420,175	07/16/2002	Stemmer	
	20.	US-2002/0123048	09/05/2002	Gau	
	21.	US 6,329,160-B1	12/11/2001	Schneider et al.	
	22.	US 6,436,651-B1	08/20/2002	Everhart et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
	23.	WO 89/05977	06/29/1989	Igen Inc.		
	24.	WO 99/27351	06/03/1999	Lockheed Martin Energy Research Corp.		
	25.	WO 99/67423	12/29/1999	The Regents of the Univ. of California		
	26.	WO 01/54814	08/02/2001	Motorola Inc.		
	27.	WO 02/00006	01/03/2002	Board of Trustees of the Univ. of Illinois		
	28.	WO 02/06789	01/24/02	The Ohio State Univ. Research Foundation; Univ. of Kentucky Research Foundation		
	29.	WO 02/10750	02/07/2002	Maxygen, Inc.		

**Examiner
Signature**

Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04.

³ Enter origin that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.

{M:\4107\1001443-us3\00064234.DOC {00000000-0000-0000-0000-000000000000}}

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	T.B.A.
				Filing Date	Concurrently Herewith
				First Named Inventor	Lance Laing
				Group Art Unit	TBA
				Examiner Name	TBA
				Attorney Docket Number	04107/100L443-US3
Sheet	2	of	3		

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	30.	Bailey J., (1999) Lesson from metabolic engineering for functional genomics and drug discovery, <i>Nature</i> , 17:616-618	
	31.	Baselt et al., (1996) Biosensor based on force microscope technology, <i>J. Vac. Sci. Technol. B</i> , 14:789-793	
	32.	Beerli et al., (1998) Toward controlling gene expression at will: Specific regulation of the <i>erbB-2/HER-2</i> promoter by using polydactyl zinc finger proteins constructed from modular building blocks, <i>Proc. Natl. Acad. Sci. USA</i> , 95:14628-14633	
	33.	Beerli et al., (2000) Positive and negative regulation of endogenous genes by designed transcription factors, <i>PNAS</i> , 97:1495-1500	
	34.	Beste et al., (1999) Small Antibody-Like Proteins with Prescribed Ligand Specificities Derived from the Lipocalin Fold, <i>Proc. Natl. Acad. Sci. USA</i> , 96:1898-1903	
	35.	Blaesing et al., (2000) Analysis of the DNA-binding domain of <i>Escherichia coli</i> DnaA protein, <i>Molecular Microbiology</i> , 36:557-569	
	36.	Cai et al., (1997) Use of a luminescent bacterial biosensor for biomonitoring and characterization of arsenic toxicity of chromated copper arsenate (CCA), <i>Biodegradation</i> , 8:105-111	
	37.	Ensor et al., (1997) Engineered Bacteria Can Detect Toxic Metals, http://www.uky.edu/WaterResources/WORKS18.HTML	
	38.	Greisman et al., (1997) A General Strategy for Selecting High-Affinity Zinc Finger Proteins for Diverse DNA Target Sites, <i>Science</i> , 275:657-661	
	39.	Kang et al., (2000) Zinc Finger Proteins as Designer Transcription Factors, <i>J. of Biol. Chem.</i> , 275:8742-8748	
	40.	Köhler et al., (1999) Reporter gene bioassays in environmental analysis, <i>Fresenius J. Anal. Chem.</i> , 366:769-779	
	41.	Lau et al., (1999) Dissecting the Role of Acyltransferase Domains of Modular Polyketide Synthases in the Choice and Stereochemical Fate of Extender Units, <i>Biochemistry</i> , 38:1643-1651	
	42.	Malmqvist M., (1993) Biospecific interaction analysis using biosensor technology, <i>Nature</i> , 361:186-187	
	43.	Mascini et al., (2001) DNA electrochemical biosensors, <i>Fresenius J. Anal. Chem.</i> , 369:15-22	
	44.	Nielsen et al., (1991) Sequence-Selective Recognition of DNA by Strand Displacement with a Thymine-Substituted Polyamide, <i>Science</i> , 254:1497-1500	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.

Application Number	T.B.A.
Filing Date	Concurrently Herewith
First Named Inventor	Lance Laing
Group Art Unit	TBA
Examiner Name	TBA
Attorney Docket Number	04107/1001443-US3

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	45.	O'Shannessy et al., (1994) [15] Determination of Rate and Equilibrium Binding Constants for Macromolecular Interactions by Surface Plasmon Resonance, <i>Methods in Enzymology</i> , 240:323-349	
	46.	Quinn et al., (2000) Development and Application of Surface Plasmon Resonance-Based Biosensors for the Detection of Cell-Ligand Interactions, <i>Analytical Biochemistry</i> , 281:135-143	
	47.	Reynolds K., (1998) Combinatorial Biosynthesis: Lesson Learned from Nature, <i>Proc. Natl. Acad. Sci. USA</i> , 95:12744-12746	
	48.	Shi et al., (1994) Identification of a Putative Metal Binding Site in a New Family of Metalloregulatory Proteins, <i>J. of Biol. Chem.</i> , 269:19826-19829	
	49.	Shi et al., (1996) The Role of Arsenic-Thiol Interactions in Metalloregulation of the <i>ars</i> Operon, <i>J. of Biol. Chem.</i> , 271:9291-9297	
	50.	Silver et al., (2001) Environmental Chemistry of Arsenic, Chp. 11, Arsenic Metabolism: Resistance, Reduction and Oxidation, <i>Marcel Dekker Publishers</i>	
	51.	Stemmer W., (1994) Rapid evolution of a protein <i>in vitro</i> by DNA shuffling, <i>Nature</i> , 370:389-391	
	52.	Wada et al., (1992) Codon usage tabulated from the GenBank genetic sequence data, <i>Nucleic Acids Research</i> , 20:2111-2118	
	53.	Wang et al., (1999) Dimerization of zinc fingers mediated by peptides evolved <i>in vitro</i> from random sequences, <i>Proc. Natl. Acad. Sci. USA</i> , 96:9568-9573	
	54.	Xu et al., (1996) The Chromosomal <i>arsR</i> Gene of <i>Escherichia coli</i> Encodes a <i>trans</i> -acting Metalloregulatory Protein, <i>The J. of Biol. Chem.</i> , 271:2427-2432	
	55.	Xu et al., (1997) Dimerization is Essential for DNA Binding and Repression by the ArsR Metalloregulatory Protein of <i>Escherichia coli</i> , <i>The J. of Biol. Chem.</i> , 272:15734-15738	
	56.	Zhang et al., (1991) Low-usage codons in <i>Escherichia coli</i> , yeast, fruit fly and primates, <i>Gene</i> , 105:61-72	
	57.	Baselt et al., (1996) "Biosensor based on force microscope technology", <i>J. Vac. Sci. Technol. B</i> , 14:789-793	
	58.	Cotell, C. (Oct. 2001) "Single Molecule Detector", http://techtransfer.nrl.navy.mil , Points of Contact, Naval Research Laboratory, 4555 Overlook Avenue, SW, Washington, DC 20375-5320	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.